UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,342	11/20/2003	Francisco J. Cifuentes	10030679-1	1237

7590 05/22/2007

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER	
AGRAWAL, RITESH	

ART UNIT	PAPER NUMBER
1631	

MAIL DATE	DELIVERY MODE
05/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,342	CIFUENTES ET AL.	
	Examiner	Art Unit	
	Ritesh Agrawal	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 20-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-11* is/are allowed.

6)☒ Claim(s) *1-8 and 20-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicants' amendment and request for reconsideration in the communication filed on 2/26/07 are acknowledged and the amendments entered.

Claims 1-11 and 20-26 are currently pending and under consideration.

Withdrawn Rejections

2. The prior rejections under 35 U.S.C.112, 2nd paragraph, with respect to claim indefiniteness from the Office action mailed 11/22/06 are hereby withdrawn in light of applicants' amendments filed 2/26/07.

Specification

3. The specification is objected to because of the following:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds the maximum allowable length for an abstract. Correction is required. See MPEP § 608.01(b).

Appropriate correction is required.

This objection is newly applied, but necessitated by applicants' amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is newly applied, but necessitated by amendment.

Applicants have amended claim 2 to recite the limitation "representing a set of genes" in line 3. It is unclear if this set of genes is the same or different from the previously recited set of genes.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(f) he did not himself invent the subject matter sought to be patented.

5. Claims 1-4, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bonaventure et al. (Brain Research, Vol. 943, Pages 38-47, July, 2002).

The claims are drawn to a method of selecting a combination of nucleic acid sample pairs comprising:

(a) conducting differential expression experiments using nucleic acid sample pairs and nucleic acid probes immobilized on a substrate

(b) selecting a nucleic acid sample pair by maximizing the number of differentially expressed genes

Bonaventure et al. disclose carrying out differential expression experiments where they look for genes enriched in various brain nuclei using cDNA microarrays (abstract). Given that they see differential expression, the various brain nucleic must comprise different nucleic acid samples. From these experiments, they select locus coeruleus (LC) for discussion in the paper where these nuclei have the maximum number of enriched (or differentially expressed) genes (page 42, 1st column, 3rd paragraph, lines 9-10).

With respect to claim 2, Bonaventure et al. disclose using intensities for each gene (page 40, 1st column, 2nd paragraph, lines 11-14) and calculating a median value across probes (page 40, 1st column, 2nd paragraph, line 16) and determining the

statistical significance of the spread in values (page 40, 1st column, 2nd paragraph, lines 16-20) thereby determining whether they probe values cluster.

With respect to claims 3 and 4, Bonaventure et al. disclose using the raw signal intensities to produce log-treated values (page 40, 1st column, 2nd paragraph, line 20).

With respect to claim 6, Bonaventure et al. carry out a plurality of differential gene expression experiments using a plurality of experimental sets in using a plurality of cellular nuclei (see table 1).

With respect to claims 7-8, Bonaventure et al. disclose that each sample is hybridized to a separate substrate (page 40, 1st paragraph, line 3), as in claim 8, and, in the process of being hybridized to separate substrates they are being hybridized to a substrate, as in claim 7.

This rejection is modified from the rejection in the Office action mailed 11/22/06. The modification was necessitated by applicants' amendments. Applicants' arguments have been fully considered, but they are not found persuasive.

Applicants argue:

> Bonaventure fails to disclose or suggest at least the following elements of claim 1: (i) selecting a combination of nucleic acid sample pairs for evaluating the ability of an oligonucleotide probe to measure differential expression of genes and (ii) selecting a combination of nucleic acid sample pairs in relation to the members of said combination having a maximized number of genes from the set of genes that exhibit differential expression and a minimized number of genes from the set of genes that do not exhibit differential expression (remarks, page 10, 2nd paragraph).

Despite applicants' assertions, Bonaventure discloses selecting a combination of nucleic acid sample pairs in selecting the locus coeruleus samples for discussion in their paper (page 42, 1st column, 3rd paragraph, lines 9-10) wherein these "selected"

samples have the maximized number of differentially expressed genes (table 1) and, since the same genes are monitored for all of the samples, and genes are either differentially expressed or not, by having the maximum number of differentially expressed genes, they also have the minimum number of genes that do not exhibit differential expression. Applicants' claims' recitation of "for evaluating the ability of an oligonucleotide probe to measure differential expression of genes", in the preamble of the claim, is not a method step, it is an intended use. Intended use clauses do not differentiate a method over the prior art:

> *A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).*

Furthermore, with respect to claim 6, applicants argue:

> Claim 6 is directed to the method of claim 1 wherein the nucleic acid sample pairs are tissue pairs. The Bonaventure reference does not disclose or suggest such a method. The experiments represented in Table 1 are gene expression profiling measurements from seven different brain nuclei or subnuclei in three adult rats. There is no disclosure or suggestion of tissue pairs (remarks, page 11, 4th paragraph).

Despite applicants' assertions, in the absence of a formal definition for the term "tissue pair", it is being interpreted to mean any set (the same or different type) of tissues. As the samples used by Bonaventure are from brain sample, they represent tissues and any combination thereof can represent a "tissue pair".

With respect to claims 7-8, applicants argue:

> The Bonaventure reference is concerned with gene expression profiling. The authors are concerned with expression among brains of different individuals with the purpose of understanding aspects of brain biology (remarks, page 11, 6th paragraph).

Applicants' thus appear to argue that because Bonaventure's use is different from theirs, the reference doesn't anticipate the claim. As argued above, anticipation is based upon the recitation of the method steps, not the intended use thereof.

6. Claims 1-8 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Collins et al. (US Publication # 2004/0101846, filed November 22nd, 2002).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The claims are drawn to a method of selecting a combination of nucleic acid sample pairs comprising:

(a) conducting differential expression experiments using nucleic acid sample pairs and nucleic acid probes immobilized on a substrate

(b) selecting a nucleic acid sample pair by maximizing the number of differentially expressed genes

Collins discloses selection of nucleic acid sample pairs by hybridizing nucleic acid sample pairs to nucleic acids on microarrays and selecting for those sample pairs

that maximize the number of mRNAs that are differentially expressed (paragraph 70, lines 1-8). Since Collins is detecting differential expression, the different pairs must comprise different nucleic acid samples.

With respect to claim 2, Collins discloses evaluating each probe (representative of genes) and clustering based upon evaluation of differential expression (see, for example, paragraphs 51,52).

With respect to claims 3-4, Collins discloses consideration of the parameter of LogRatio in determining differential expression (for example, paragraph 71).

With respect to claim 5, Collins discloses that the parameters include probability of significant difference and number of probes of significant difference (paragraph 99, lines 8-10).

With respect to claim 6, Collins discloses that the sample pairs are tissue pairs (paragraph 70, lines 6-8).

With respect to claims 7-8, Collins discloses contacting sample pairs with either a single substrate or separate substrates (paragraph 69).

With respect to claim 20, Collins discloses evaluating candidate probes using sample pairs identified through the method of claim 1 (see paragraph 69).

With respect to claim 21, Collins discloses the method (claim 1) where Collins has previously defined that the evaluation employs a nucleic acid sample pair selected by the method of claim 1 (as cited for claim 20).

With respect to claim 22, Collins discloses the method (see, for example, claims 18 or 19).

With respect to claim 23, Collins discloses the method (see, for example, paragraph 116).

With respect to claim 24, Collins discloses the method (see, for example, paragraph 116, lines 30-33).

With respect to claim 25, Collins discloses the method (see, for example, paragraph 115).

With respect to claim 26, Collins discloses the method (see, for example, paragraph 116, lines 32-33).

This rejection is modified from the rejection in the Office action mailed 11/22/06. The modification was necessitated by applicants' amendment.

Applicants' arguments with respect to the rejection have been fully considered, but they are not found persuasive.

Applicants argue:

> Collins fails to disclose or suggest at least the following elements of claim 1: (i) selecting a combination of nucleic acid sample pairs for evaluating the ability of an oligonucleotide probe to measure differential expression of genes and (ii) selecting a combination of nucleic acid sample pairs in relation to the members of said combination having a maximized number of genes from the set of genes that exhibit differential expression and a minimized number of genes from the set of genes that do not exhibit differential expression.

Despite applicants' arguments, Collins discloses:

> sample pairs chosen to maximize the number of mRNAs that are differentially expressed between the members of the pair (paragraph 70, lines 8-10).

Since particular sample pairs are chosen, Collins has selected sample pairs that maximize the number of differentially expressed genes and therefore minimize the number of genes that do not exhibit differential expression. As argued above, the fact

that Collins does not disclose that the sample pairs were selected for evaluating oligonucleotide probes does not obviate the anticipation. Furthermore, given that Collins discloses the use of the selected sample pairs for evaluating candidate oligonucleotide probes (paragraph 70, lines 1-10), it is clear that Collins sample pairs can be used for the same intended purpose.

Applicants' arguments against the anticipation of the dependent claims rely on the failure of the Collins reference to anticipate claim 1 (remarks, page 13, 3rd paragraph through page 14, 1st paragraph). As such, having rebutted the arguments against claim 1, the arguments against the dependent claims are rebutted as well.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 20-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley et al. (US Patent Publication # 2001/0046671, Publication Date Nov. 29, 2001) in view of Bonaventure et al. (Brain Research, Vol. 943, Pages 38-47, July, 2002).

The claims are drawn to a method of identifying a sequence of nucleic acid suitable for use as a substrate immobilized probe comprising:

(a) identifying a plurality of candidate probes

(b) empirically evaluating each of the candidate probes using the sample pair of Claim 1

(c) clustering candidate probes into groups

(d) selecting one of the groups

(e) choosing a candidate probe from the selected group

Dooley et al. disclose identifying a plurality of candidate probes that are chosen for their expression in a given sample type (paragraph 12, lines 11-14). They empirically

evaluate these probes against a specified sample for which they are specifically designing the probes (Fig. 1, II, 3). They disclose clustering of probe sequences (Fig. 1, III, 4), selecting those that are relevant to the desired application (Fig. 1, IV, 1) and then specifically choosing examples that are appropriate (fig. 1, IV, 2-4).

However, Dooley et al. do not disclose using a sample pair from claim 1.

Bonaventure et al. disclose carrying out differential expression experiments where they look for genes enriched in various brain nuclei using cDNA microarrays (abstract). Given that they see differential expression, the various brain nucleic must comprise different nucleic acid samples. From these experiments, they select locus coeruleus (LC) for discussion in the paper where these nuclei have the maximum number of enriched (or differentially expressed) genes (page 42, 1st column, 3rd paragraph, lines 9-10).

With respect to claim 22, the combination of Dooley et al. disclose the method of claim 21 for identifying nucleic acid probes (as cited above), and Dooley et al. disclose synthesizing and depositing said probes in an array on a substrate (for example, fig. 1, IV, 4).

With respect to claim 23, Dooley et al. disclose contacting the produced array with a sample and detecting the presence of complexes (for example, fig. 1, V, first bullet, and references therefrom).

With respect to claims 24 and 26, Dooley et al. disclose forwarding data from a detector where the data in then received by a computer (paragraph 8, lines 14-17).

With respect to claim 20, claim 21 represents a species of claim 20 and thus since the combination of Dooley et al. and Bonaventure et al. disclose the method of claim 21, they anticipate the method of claim 20.

It would have been obvious, for one of ordinary skill in the art, at the time the invention was made, to modify the method of Dooley et al. to use it in combination with the method of Bonaventure et al. to test Dooley's probes with the tissue pair of Bonaventure et al. One of ordinary skill in the art would have been motivated to do this because, as suggested by Dooley et al., by designing an "informative array" using the combination, one could enhance the ability to identify differentially expressed genes (paragraph 19, lines 4-8).

This rejection is maintained from the previous Office action mailed 11/22/06. Applicants' arguments have been fully considered, but they are not found persuasive.

Applicants' arguments with respect to the rejection, are based upon the alleged impropriety of the anticipation of claim 1 by Bonaventure (remarks, page 14, 4th paragraph through page 15, 2nd paragraph). Therefore, the arguments presented above serve as a rebuttal to the arguments of the instant rejection.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 20-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 and 18-19 of copending application 10/303160.

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claims because the examined claim is either anticipated by, or would have been obvious over, the reference claims. See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claim 21 of the instant application is drawn to a method for identifying a sequence of a nucleic acid that is suitable for use as a substrate immobilized probe comprising (a) identifying a plurality of candidate probe sequences, (b) empirically evaluating each of said candidate probe sequences wherein the empirical evaluation

employs a nucleic acid sample pair chosen by the method of claim 1, (c) clustering said candidate probe sequences, (d) selecting one of said one or more groups of clustered sequences, and (e) choosing a candidate probe sequence from said selected group.

While the exact wording of claim 1 of the '160 application is not the same as that of claim 21 of the instant application, the only difference in scope is in step b with the only difference being the additional requirement of the empirical evaluation employing a nucleic acid sample pair as selected by of claim 1 in the instant application versus just an empirical evaluation in claim 1 of the '160 application. Thus the "empirical evaluation" step of claim 1 of the '160 application is generic to the "empirical evaluation employ[ing] a nucleic acid sample pair selected by a method according to Claim 1" step of the instant claim 21.

The portion of the specification of the '160 application that supports the recited "empirical evaluation" procedure includes an embodiment that would anticipate the "empirical evaluation employ[ing] a nucleic acid sample pair" step of the instant claim 21. Paragraph 70, lines 6-10 of the '160 application specifically discloses a species of empirical evaluation wherein the empirical evaluation employs a nucleic acid sample pair selected by a method of instant claim 1.

With respect to claim 20, claim 21 represents a species of claim 20, and it is therefore also anticipated by the prior application.

With respect to claim 22 it is drawn to a method of preparing a nucleic acid array based upon identifying nucleic acid probes using the method of claim 21, and claims 18-

19 of the prior application disclose a method of preparing an array of nucleic acids based upon identifying nucleic acid probes as in claim 1 of the prior application

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This rejection is newly applied.

9. Claims 20-22 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. This rejection is newly applied.

For the reasons discussed above, it is apparent that copending Application No. 10/303,160 contains claimed subject matter in claims 1 and 18-19 that is not patentably distinct from instant claims 20-22. Because the inventive entity of copending Application 10/303,160 is different from the instant application, a rejection is appropriate under 35 U.S.C. 102(f). The applicants can overcome this rejection by either stating in a declaration under 37 CFR 1.132 that the commonly invented claimed subject matter was invented by the same inventive entity, or by stating that the copending application claims a nonobvious species that is patentably distinct from the generic claims of the instant application. The applicants should indicate each of the inventor's roles in conceiving of the invention 10/303,160. All inventors discussed in the declaration should sign the declaration.

Conclusion

10. Claims 9-11 are allowable. Claims 1-8 and 20-26 are rejected.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ritesh Agrawal whose telephone number is (571) 272-2906. The examiner can normally be reached on 8:30 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ritesh Agrawal, PhD RA

17 May 2007

JOHN S. BRUSCA, PH.D
PRIMARY EXAMINER